3.8 CULTURAL RESOURCES

INTRODUCTION

This section describes the cultural resources in the SCAG region, discusses the potential impacts of the RTP on these resources, identifies mitigation measures for the impacts, and evaluates the residual impacts.

ENVIRONMENTAL SETTING

The environmental setting describes the paleontological, archeological, and historic resources of the SCAG region.

Paleontological Resources

Paleontological resources are fossilized remains of non-human organisms that lived in the region in the geologic past. Paleontological sites and fossils are non-renewable resources that are important in our understanding of the prehistory and the geologic development of southern California. Many paleontological sites include remains of species that are now extinct. Paleontological sites are predominantly found in sedimentary rock deposits, and most of the Los Angeles Basin is composed of these sedimentary deposits. Paleontological resources are most easily found in areas that have been uplifted and eroded, and they can be found anywhere that subsurface excavation is being carried out. Ancient marine fossils have been found both in the Santa Monica Mountains, particularly in exposed canyon areas, streambeds, along road cuts, and beneath the streets of Los Angeles during storm drain and subway construction.

The following types of paleontological resources are known to exist in the SCAG region:

- True Fossils: Lithified or replaced remains of plants and animals preserved in a rock matrix (e.g., microfossils, shells, animal bones and skeletons, and whole tree trunks);
- Trace Fossils: Molds, casts, tracks, trails and burrow impressions made in soft clays and muds which subsequently were turned to stone, preserving the images of past life (e.g., shells, footprints, leaf prints, and worm tubes);
- Breas: Seeps of natural petroleum that trapped extinct animals and preserved and fossilized their remains.

Both marine and land vertebrate and invertebrate fossils are found in the SCAG region.[1]

[1] Bedrossian T. L. (1975). Vertebrate fossils and the history of animals with backbones. *California Geology, 28(11)*, 243-259.

Fossils and their Associated Formations

Geologic formations are the matrix in which most fossils are found. These formations are different from modern soils and cannot be correlated with soil maps, which depict a thin veneer of surface soils. Geologic formations form complex relationships below the surface and may range in thickness from a few feet to hundreds of thousands of feet. Geologic maps (available through the U.S. Geological Survey (USGS) and the California Geological Survey (CGS)) show the surface expression of geologic formations along with other geologic features such as faults, folds, and landslides. Although sedimentary formations were initially deposited one atop the other over time the layers have been squeezed, tilted, folded, cut by faults and vertically and horizontally displaced, so that today, any one rock unit does not usually extend in a simple horizontal layer. If a sensitive formation bearing fossils can be found at the surface in an outcrop, that same formation may extend many feet down into the ground and also extend for miles just below the surface. Thus, predicting which areas are paleontologically sensitive is difficult.

Paleontologists consider all vertebrate fossils to be of significance. Fossils of other types are considered significant if they represent a new record, new species, an oldest occurring species, the most complete specimen of its kind, a rare species worldwide, or a species helpful in the dating of formations.

Fossil bearing sedimentary formations and crystalline basement rocks (metamorphic & plutonic) overlain by sedimentary and volcanic rocks are prevalent throughout southern California. Although the exact locations of these formations are considered proprietary to help prevent the removal or destruction of these important, non-renewable resources, Table 3.8-1 identifies the general location of some of the more significant fossil localities for the SCAG region.

Archaeological Resources

Archaeological resources are the physical remains of past human activity, and humans have occupied southern California for thousands of years. The SCAG region is rich in archaeological resources that range from the early prehistoric period to the historic period. As of October 1999, over 33,000 archaeological or historic locations have been identified in the SCAG region. They are distributed in the region as shown in Table 3.8-2. The location of known archaeological sites is confidential to help prevent scavenging of artifacts. Detailed information, especially their location, is considered proprietary by State law. Therefore, Table 3.8-2 lists these resources only by county.

Due to the proprietary nature of archaeological information, the exact location of most of these locales cannot be discussed. However, some of the sites have been made public in county, regional, state, and federal parks, or listed on public registers. These include:

- The site of the Puvunga Indian Village (NR) Los Angeles County
- Vasquez Rocks (NR) Los Angeles County
- The Black Star Canyon Indian Village Site (CHL-217) Orange County

Table 3.8-1: Significant Fossil Localities in the SCAG Region

Location	Fossil Type	Formations
Octillo Area (Shell Canyon, Coyote Mountains, Painted Gorge, Yuma Buttes)	Invertebrates	Imperial
Plaster City	Freshwater invertebrates	Lake Cahuilla Beds
La Brea Tar Pits	>500,000 specimens, >200 types of animals	
Palos Verdes Peninsula	Mastadon, mammoth, horse, camel, sloth	Palos Verdes Sand
Palos Verdes Peninsula	Grey whale	San Pedro
Palos Verdes Peninsula	Fish, birds, sea lion, plants, baleen whale, horse, sloth, sea otter, mammoth, mastodon, bison, camel, tapir	Monterey Shale
Palos Verdes Peninsula	Dolphin	Monterey Shale
Santa Monica Mountains (Topanga Canyon)	Cypraeid gastropod	Topanga
Santa Monica Mountains (Old Topanga Canyon Road, Piuma Road)	Numerous Fossils	Topanga
Mint Canyon	Oldest hawk in California	Tick Canyon
Mint Canyon	Horse, elephant, camel	Mint Canyon
Puente Hills (Hacienda Heights)	Fish	Puente
Puente Hills (Diamond Bar)	Fish and leaves	Puente
Buena Park (Ralph B. Clark Paleontological Park)	Ice age mammals including Imperial Mommoth	La Habra
Laguna Hills/Dana Point	Baleen whale (largest and most complete skull)	Capistrano
Laguna Hills/Dana Point (Costeau Park)	Terrestrial mammal	Capistrano
San Joaquin Hills, Laguna Niguel	Dolphin	Monterey
Newport Bay East Bluffs	Invertebrates	Palos Verdes Sand
Santa Ana Mountains (Eastern Carriort)	76 Localities with various species	Ladd, Sespe-Vacqueros, Tapanga, Silverado, Santiago, Puente
Santa Ana Mountains (Robinson Ranch/Dove Canyon)	Wood. Leaves, ammonites	Silverado
Santa Ana Mountains (Black Star and Silverado Canyons)	Invertebrates	Ladd
Santa Ana Mountains (Gypsum Canyon)	Invertebrates, shark teeth	Topanga
Loma Linda to Banning (“The Badlands")	Vertebrate fossil remains such as horse, camel and rhinoceros	San Timoteo
Soboba Hot Springs	80 varieties of fossilized chaparral and woodland plant species	Soboba
Lake Elsinore	Plants	Silverado
California Oaks	Horse, coyote, rodents, reptiles, amphibians	Unnamed sandstone
Margarita Creek	Horse fossils	Pauba
Bernasconi Hills	Mammoth, horse, saber toothed cat	Lakeview Hot Springs
Perris	Large oreodonts	Lake Matthews
Temecula (I-15 & I-79)	Vertebrate fossils	Temecula Arkose
Barstow, Rainbow Basin	Horse, camel	Barstow
Cajon Pass	Pleiosaurs	San Francisquito
Cajon Valley	Small mammals	Crowder, Punchbowl
Cady Mountains	Oldest tertiary vertebrates in Mojave	Hector
Badlands east of Barstow	Vertebrates	Manix
Boron Open Pit Mine	Lizards	Kramer Beds
Lava Mountains	Lizards, rodents	Bedrock Spring
Red Rock Canyon	Vertebrates	Dove Spring
Cache Peak	42 taxa including microvertebrates	Bopesta
Hills west of Mojave	23 mammalian taxa including 12 of microinvertebrates	Homed Toad
Lone Pine Road near I-15	Whales	Vaqueros
Calico Mountains	Nonmarine insects, invertebrates	Barstow
Marble Mountains	Trilobites, brachiopods	Latham Shale, Chambless Limestone
Providence Mountains	Trilobites, brachiopods	Latham Shale
Kelso Mountains	Trilobites	Latham Shale
Striped Mountains	Coral and invertebrates	Bird Spring
Soda Mountains	Coral and brachiopods	Bird Spring
Las Posas Hills	Echinoids, small mammals, horse, saber, cat, rhino	Las Posas, Saugas
South Mountain	Small mammals, oreodont	Saugus
Tapo Ranch, Pearson Ranch	Lemurs, carnivores, rhino, monkey	Sespe
Balcom Canyon, Grimes Canyon	Plants, fish, insects	Monterey
Pine Mountain	Invertebrates	Santa Margarita
Rincon Beach	Pine Cones	Pico
Simi Wash	Invertebrates	Las Llajas
Pitas Point	Invertebrates	Santa Barbara

Source: Due to the multiplicity of sources used to prepare this table, sources are included in the Appendices.

Table 3.8-2: Archaeological Site Distribution	
County	**Approximate Number of Archaeological Sites**
Imperial	8,036
Los Angeles	3,103
Orange	1,616
Riverside	7,030
San Bernardino	10,900
Ventura	1,647
SCAG REGION TOTAL	**32,332**

Sources: Southeast Information Center (Imperial County); South Central Coastal Information Center (Los Angeles, Orange, and Ventura Counties); Eastern Information Center (Riverside County); and San Bernardino Archaeological Center (San Bernardino County)

- The Fairview Indian Site (NR) Orange County
- Desert Intaglios (CHL-101) Riverside County
- Site of the Indian Village of Pochea (CHL-104) Riverside County
- Carved Rock (CHL-187) Riverside County
- Painted Rock (CHL-190) Riverside County
- The Hemet Maze (CHL-557) Riverside County
- The Calico "Early Man" Site San Bernardino County
- Anacapa Island Archaeological District (NR) Ventura County

The SCAG region was occupied during both the prehistoric and protohistoric periods; therefore archaeological sites are widespread and numerous. Rock outcrops, river and stream drainages, and coastal strips were often prime locations for Native American village sites or processing camps. These locations now include highly urbanized locations, such as cities, and undeveloped areas of the high desert. Often archaeological sites are covered by three feet or more of topsoil, however it is possible that construction may not disturb the surface soils by more than a foot or two, thereby protecting remains even after an area has been fully urbanized. In 1998, a large undisturbed Native American burial ground, dating to the Protohistoric Period, was exposed during construction at the ARCO Refinery in Los Angeles. The refinery had been there for seventy-five years, yet the burial level was located under three to five feet of flood deposits from the nearby Los Angeles River.

In contrast to archaeological sites, the location of historic sites is open to the general public in such registers as The National Register of Historic Places (National Register or NR), the California Historical Landmarks (CHL), the California Points of Historic Interest, and the State Historic Inventory. In addition, the City of Los Angeles Historic-Cultural Monuments listing is available in print.

Properties are continuously added to each of these historic registers. The CHL is reprinted every ten or so years. The Historic Resources Inventory (HRI) is revised at least twice a year. Points of Historic Interest (PHI) and the National Register are also updated continuously.

Prehistoric Period (Prior to 1542)

The Prehistoric cultural history of the SCAG region can be outlined by the following chronology:[2]

- Early Man Horizon
  Spanning the period from the end of the Pleistocene to approximately 6,000 BC, archaeological resources attributed to this horizon are characterized by large projectile points and scrapers.

- Milling Stone Horizon
  Characterized by the appearance of hand stones and milling stones, this horizon tentatively dates to between 6,000 BC and 1,000 BC. Cultural resources from this period include choppers and scraper planes but generally lack projectile points. Larger projectile points appeared in the in the latter portion of the Milling Stone Horizon.

- Intermediate Horizon
  Dated to between 1,000 BC and AD 750, the Intermediate Horizon represents a transitional period. Cultural resources from the Intermediate Horizon sites contain large stemmed or notched projectile points and portable mortar and pestles.

- Late Prehistoric Horizon
  Extending from AD 750 to Spanish contact in AD 1769, the Late Prehistoric Horizon reflects an increased sophistication and diversity in technology. This is characterized by the presence of small projectile points, which imply the use of the bow and arrow. Additional cultural resources include steatite bowls, asphaltum, grave goods, and elaborate shell ornaments.

Protohistoric Period (1542 to 1769)

Although early Spanish explorers and mission fathers recorded information on the local Native American populations, professional anthropological studies did not begin until the end of the 19th Century after most of the SCAG region Indian groups had been either assimilated by Spanish, Mexican, and American cultures or relocated to reservations.

The SCAG region once was the home to at least eleven distinct Native American groups. These include the Cahuilla, Chumash, Gabrielino, Halchidhoma, Kitanemuk, Luiseno, Mohave, Quechan,

[2] Wallace, W. J. (1955). A suggested chronology for southern California coastal archeology. *Southwestern Journal of Anthropology 11(3),* 214-230.

Serrano, Southern Paiute, Tataviam, and Tipai. The territorial boundaries of the Native Americans who were residing in Southern California at the time of first European contact do not coincide with today's political boundaries. Moreover, many tribal boundaries overlapped and most groups migrated within their general boundaries throughout the year.

The Federal government established reservations in southern California between 1875 and 1891. This includes the Martinez, Fort Yuma, and Colorado River reservations in Imperial County. In Riverside County are Chemehuevi, Fort Mojave, Torres, Cabazon, Augustine, Santa Rosa, Ramona, Pechanga, Soboba, Agua Caliente, Mission Creek, and Morongo. The two reservations in San Bernardino County are the San Manuel and Twenty-nine Palms reservations. No reservations were established in Los Angeles, Ventura, and Orange Counties. It was believed that the local Native American groups in those counties had become extinct.

Historic Resources

Historic resources are classified into three distinct time periods of the region's history: the Spanish Period, the Mexican Period, and the American Period.

Spanish Period (1769-1822)

Exploration of California first occurred in 1540 when a land expedition under the command of Hernando de Alarcon traversed inland along the Colorado River. Two years later, Juan Rodriquez Cabrillo was commissioned by the Spanish government to investigate the western shores of the newly acquired territory. In the following two centuries, little interest was given to California.

By the late 18th Century, European political powers created renewed interest in California. Military "explorers" from Great Britain, France and Russia began investigating the resources along the western shores of the entire North American continent. The Spanish government, realizing that settlement by any of these foreign parties north of Mexico could become a threat, decided it was time to establish their own settlements in California. In 1769, plans were put in place to found a series of forts (presidios) and Catholic missions along the Alta California coast extending as far north as Monterey Bay.

Over the course of the next half-century, four presidios, twenty missions and three towns were established. The forts were located at San Diego, Santa Barbara, Monterey and San Francisco. The towns were founded at Los Angeles (1781), San Jose (1777) and Branciforte (1797), near Santa Cruz. The settlement at Branciforte failed but all the others were successful.

During the early decades of the 19th Century, independence groups sprang up throughout the Spanish Empire. Mexico declared its independence in 1810. This attempt failed, but a second attempt ten years later succeeded. At that time, California was considered a province of Mexico. Throughout the Spanish Period, California remained largely unsettled. Table 3.8-3 lists cultural resources from the Spanish Period.

Table 3.8-3: California Historic Landmarks (CHL) of the Spanish Period (1769-1821)

CHL Number	Site Name	General Location	Year
43	The Zanja	Redlands	1819-1820
95	Guahama Rancheria	Redlands	1810
101	Giant Desert Figures	16 miles N of Blythe	N/A
103	De Anza Camp Site	Southeast of Anza	1774
104	Village of Pochea	Hemet	1774
113	Site of Junipero Serra's Cross	Ventura	1782
114	Old Mission Reservoir	Ventura	1805-1815
114-1	San Buenaventura Aqueduct	Ventura	1805-1815
145	Avila Adobe	Los Angeles	1818
156	Los Angeles Plaza	Los Angeles	1781
157	Mission San Fernando Rey de Espana	Mission Hills	1797
158	Mission San Gabriel Archangel	San Gabriel	1771
161	Site of Mission Vieja	Montebello	1770s
185	Serrano Adobe Site	South of Corona	1824
186	Serrano Tanning Vats	8 miles SE of Corona	1819
187	Carved Rock	8 miles S of Corona	N/A
190	Painted Rock	7 miles S of Corona	N/A
200	Mission San Juan Capistrano	San Juan Capistrano	1776
204	Old Santa Ana	Orange	1769
302	Old Mill	San Marino	1816
310	Mission San Buenaventura	Ventura	1782
350	Mission Purisima Concepcion	South of Winterhaven	1780
363	Centinela Springs	Inglewood	N/A
383	Site of Jose Dolores Sepulveda Adobe	Torrance	1818
451	Ortega-Vigare Adobe	San Gabriel	1792-1805
522	Serra Springs	Los Angeles	1769
556	Rancho San Francisco	Valencia	1804
557	Hemet Maze Stone	Hemet	N/A
568	Hernando de Alarcon Expedition	Andrade	1540
618	Garces-Smith Monument	San Bernardino National Forest	1776
620	Yucaipa Rancheria	Yucaipa	1822
624	Portola Expedition Site	Piru	1769
638	Old Temescal Road	South of Corona	1820
655	Portola Trail Campsite (I)	Los Angeles	1769
659	Stagecoach Inn	Newbury Park	1876
665	Portola Camp Site (II)	Beverly Hills	1769
689	Los Encinos State Historic Park	Encino	1797
727	Portola Expedition Campsite	Santa Paula	1769
753	San Fernando Cemetary	Sylmar	1800s
781	National Old Trails	Needles	1776
787	De Anza Crossing	Riverside	1775, 1776
911	Chatsworth Calera Site	Chatsworth	1800s
921	Mission San Pedro y San Pablo	Northeast of Bard	1781
965	Point Dume	Malibu	1793
977	The Arrowhead	San Bernardino	N/A
984	Casa Rancho San Antonio	Bell Gardens	1810
1008	Yuha Well	Near Seeley	1774

Source: California Department of Parks and Recreation, Office of Historic Preservation. (n.d.). California state historic landmarks listed by county. Retrieved February 4, 2003, from http://ceres.ca.gov/geo_area/counties/lists/landmarks_county.html

Mexican Period (1822-1848)

When Mexico first gained its political independence from Spain, little changed for the citizens of California. The defining event from this time period was the secularization of the Catholic Missions in 1834, following the Act of Secularization of 1833. Over the following sixteen years, all of the former mission lands were granted to secular landowners.

Secularization proved disastrous for the Native Americans who were part of the mission system. In fact, the Native Americans were self sufficient long before the arrival of Spanish domination. The mission system made the indigenous population completely dependent on the missions. When the missions were closed the Indians were left to fend for themselves.

During the two-decade period between the 1830s until 1848, one government after another ruled California. Meanwhile, the United States pushed west across the North American continent. By 1846, a number of Americans had settled in California, often marrying into landed Hispanic families.

Between 1835 and 1846 relations between Mexico and the United States deteriorated. In 1846, a revolt was attempted in Northern California. Although it was quickly thwarted, it planted the seeds for the eventual insurrection that succeeded. Within three weeks, an American naval force appeared off the California coast and formally proclaimed rule over the presidios and coastal towns. On January 13, 1847, Captain John C. Fremont accepted the surrender of Governor Pio Pico and Commander Jose Maria Fores. The United State annexed California by the Treaty of Guadalupe Hildago in 1848, ending the Mexican War and beginning the American Period. Table 3.8-4 lists cultural resources from the Mexican Period.

American Period (1848 - Present)

Shortly after the United State annexed California, gold was discovered in central California, changing the state forever. Within months of the news, droves of foreigners poured into California. At the same time, the cattle industry flourished, causing some rancho owners to become wealthy. However, the legality of the land grants issued by the Spanish and Mexican governments came into question. It took the American courts years to decide each individual case. In the meantime, many of the Mexican landowners lost their great ranchos to the new Americans through marriage, or more often through deceit.

By the time of the American Civil War (1861-1865), Americans were the dominant group in southern California, both politically and economically. Their feelings toward the war were divided, but generally Southern sympathizers outnumbered Northern supporters. During this same decade, a great drought struck southern California, devastating the cattle industry. As a result many of the former cattle ranches were sold off and used for agricultural purposes.

The railroad came to southern California during the 1870's, resulting in the first great land boom. New towns began to spring up along the new rail lines. Places once thought too desolate soon attracted settlers.

Table 3.8-4: California Historic Landmarks (CHL) of the Mexican Period (1822-1848)

CHL Number	Site Name	General Location	Year
42	San Bernardino Asistencia	Redlands	1830
44	Mormon Stockade	San Bernardino	1839
102	Site of Louis Rubidoux House	Rubidoux	1844
115	Olivas Adobe	Ventura	1837, 1849
121	Agua Mensa	Colton	1845
127	Casa de Pio Pico	Whittier	1830's?
144	Church of Los Angeles	Los Angeles	1822
151	Campo de Cahuenga	North Hollywood	1847
152	Dominguez Ranch House	Compton	1826
167	La Mesa Battlefield	Vernon	1847
168	Oak of the Golden dream	Newhall	1842
189	Dana Point	Dana Point	1835
199	Serrano Adobe	El Toro	1842
217	Black Star Canyon Indian Village Site	Near Silverado	1878
224	Site of Third Serrano House	Southeast of Corona	1840's
226	Bernardo Yorba Ranch Site	Yorba Linda	1834
227	Diego Sepulveda Adobe Costa Mesa	Costa Mesa	Late 1820s
301	Site of Lugo Adobe	Los Angeles	1840's
303	Site of Old Rubidoux Grist Mill	Rubidoux	1846-7
360	Tapia Adobe	Cucamonga	1839
362	Romulo Pico Adobe	Mission Hills	1834
368	Hugo Reid Adobe	Arcadia	1839
385	Rio San Gabriel Battlefield	Montebello	1847
490	Cucamonga Rancho Winery	Cucamonga	1839
528	Yucaipa Adobe	Yucaipa	1842
553	Rancho Camulos	2 miles east of Piru	1839
637	Catalina Adobe	Glendale	1830's
920	Casa de San Pedro	San Pedro	1823
942	Site of Rancho Chino Adobe	Chino	1841
944	Site of Fort Romualdo Pacheco	West of Imperial	1822
963	Mojave Road	Northeast of Barstow	1826
978	Rancho los Cerritos	Long Beach	1844
979	Rancho Simi	Simi Valley	1842
1005	Santa Rosa Rancho	Murrietta	1846

Source: California Department of Parks and Recreation, Office of Historic Preservation. (n.d.). California state historic landmarks listed by county. Retrieved February 4, 2003, from http://ceres.ca.gov/geo_area/counties/lists/landmarks_county.html

As a result of new towns in places like the Mojave Desert, exploration for mineral deposits soon produced new strikes in places such as Calico in San Bernardino County in 1881. During the next several decades, many such mining camps were established in the eastern counties, most of these camps remained in existence only for a short time.

In the Twentieth Century the region underwent a metamorphosis from a primarily agricultural region into an urban metropolis. Southern California has attracted and maintained millions of people and employment opportunities and has developed into the second-largest metropolitan region in the country.

The activities and achievements of the recent past have generated many important cultural resources throughout the region. Table 3.8-5 lists cultural resources from the American period.

Table 3.8-5: California Historic Landmarks (CHL) of the American Period (1849 to Present)

CHL Number	Site Name	General Location	Year
20	Parent Orange Tree	Riverside	1870
96	Mormon Road	West of Crestline	1851
112	City of Anaheim	Anaheim	1857
147	Banning Park	Wilmington	1850's
150	Brand Park (Memory Garden)	Los Angeles	1920
159	Pico Hotel	Los Angeles	1869-1870
160	Oldest House in Hollywood	Hollywood	1870's
169	Drum Barracks	Wilmington	1862
170	Hancock Park La Brea	Los Angeles	1916
171	Merced Theater	Los Angeles	1870
172	Pioneer Oil Refinery	Newhall	1870
182	Tumco Mines	5 miles NE of Ogilby	1884
188	Butterfield Stage Station	South of Corona	1858
191	Yorba-Slaughter Adobe	South of Chino	1850-1853
193	Picacho Mines	North of Winterhaven	1852
194	Mountain Springs Stage Station	Mountain Springs	1850's
198	Old Landing	Newport Beach	1870
201	Pioneer House of the Mother Colony	Anaheim	1857
202	Silverado	Silverado	1878
203	Red Hill	Santa Ana	1893
205	Modjeska's Home	Northeast of El Toro	1888
218	Barton's Mound	Irvine	1857
219	Anaheim Landing	Seal Beach	1857
225	Flores Peak	Modjeska Canyon	1857
228	Carbondale	Silverado	1878
235	Casa de San Rafael	Glendale	1875
289	First Home of Pomona College	Pomona	1887
367	Lucky Baldwin's Cottage	Arcadia	1865
372	Adobe de Palomares	Pomona	1881
373	Old Salt Lake	Redondo Beach	1850s
380	Site of Diego Sepulveda Adobe	San Pedro	1854
381	Old Whaling Station	Rancho Palos Verdes	1850's
384	Timms' Point and Landing	San Pedro	1852
386	La Casa de Carrion	La Verne	1864
514	Pomona Power Plant	Claremont	1892
516	Well No. CSO	Newhall	1876
516-2	Mentryville	Newhall	1876
531	Lummis House	Los Angeles	1895
536	Original Building of the University of Southern California	Los Angeles	1880
554	DeMille Studio	Hollywood	1913
567	St. Vicent's Place	Los Angeles	1868
573	Sycamore Grove	West of Devore	1851
576	Santa Fe/Salt Lake Trail	North of San Bernardino	1917
577	Mormon Trail Monument	North of San Bernardino	1851
578	Stoddard-White Monument	North of San Bernardino	1849
579	Daly Road Monument	East of Rim Forest	1870
580	Alamitos 1	Long Beach	1921
590	Lang Station	East of Canyon Country	1876
617	Fort Benson	Colton	1856-1857
619	Holcomb Valley	Northeast of Big Bear	1860
622	Harry Wade Exit Route	Near Baker	1849
632	Old Short Cut	Angeles National Forest	1900
646	Grave of George Carlambo	Whittier	1867
649	Harry Wade Exit Route	30 miles north of Baker	1849

Table 3.8-5: California Historic Landmarks (CHL) of the American Period (1849 to Present) (cont.)

CHL Number	Site Name	General Location	Year
653	The Cascades	San Fernando Valley	1913
656	Bella Union Hotel Site	Los Angeles	1858
664	Heritage House	Compton	1869
668	Lyon Station	Newhall	1855
669	Gov. Stoneman Adobe, Los Robles	San Marino	1880
681	Paradox Hybrid Walnut Tree	Whittier	1907
688	Lyons Station Stagecoach Stop	Newhall	1850s
716	Griffith Ranch	San Fernando	1912
717	Angeles National Forest	La Canada	1892
717	Angeles National Forest	San Bernardino Mountains	1892
718	First International Air Meet	Carson	1910
725	Old Bear Valley Dam	West of Big Bear	1884
729	Old Maizeland School	Buena Park	1868
730	Old Plaza Firehouse	Los Angeles	1884
737	Chimney Rock	Lucerne Valley	1867
738	Corona Founders Monument	Corona	1886
744	Butterfield State Station Site	Los Angeles	1858
749	Saahatpa	Brookside Rest Area	1851
756	Sycamore Tree	4 miles E of Santa Paula	1846
761	Mission Inn	Riverside	1876
774	Searles Lake Borax Discovery	Trona	1862
775	Site of First Water-to-Water Flight	Newport Beach	1912
782	Calico	Near Yermo	1881
789	Site of the Los Angeles Star	Los Angeles	1851
794	McFadden Wharf	Newport Beach	1888
806	Fort Yuma	Winterhaven	1849
808	Camp Salvation	Calexico	1849
822	First Jewish Cemetery	Los Angeles	1854
837	Santa Ana Courthouse	Santa Ana	1900
840	Old Santa Monica Forestry Station	Los Angeles	1887
845	Plank Road	West of Winterhaven	1915?
847	Ventura County Courthouse	Ventura	1913
859	Von Schmidt Boundary	North of Needles	1873
871	The Gamble House	Pasadena	1908
874	Workman Home	Industry	1842
881	Site of Port of Los Angeles Long Wharf	Pacific Palisades	1893
887	Pasadena Playhouse	Pasadena	1924
892	Harvey House	Barstow	1893
894	S.S. Catalina	Lost	1924
912	Glendora Bougainvillea	Glendora	1901
918	Olinda	Brea	1897
919	St. Francis Dam Disaster Site	North of Saugus	1928
933	Site of Llano Colony	Llano	1916?
934	Japanese Detention Center	Arcadia	1942
939	Charley's World of Lost Art	Andrade	1967
939	Old Trapper's Lodge	Woodland Hills	1951
939	Hula Ville	4 miles NW of Yermo	1954
939	Possum Trot	6 miles NW of Hesperia	1955
939	Grandma Prisbrey's Bottle Village	Simi Valley	1956
943	Cornelius and Mercedes Jenson Ranch	Rubidoux	1854
947	Reform School for Juvenile Offenders (F.C. Nelles School)	Whittier	1891
948	Site of Blythe Intake	North of Blythe	1877

Table 3.8-5: California Historic Landmarks (CHL) of the American Period (1849 to Present) (cont.)

CHL Number	Site Name	General Location	Year
950	U.S. Rabb Experimental Station	Fontana	1928
959	Balboa Pavilion	Balboa	1905
960	Los Angeles Memorial Coliseum	Los Angeles	1923
961	Harold Lloyd Estate	Beverly Hills	1929
963-1	Camp Cady	24 miles N of Barstow	1860
966	Adamson House	Malibu	1926
975	El Monte-1st So. Cal. Settlement by U.S. Immigrants	El Monte	1850s
985	Camp Pilot Knob	Felicity	1943
985	Camp Young	28 miles E of Indio	1942
985	Camp Coxcomb	45 miles E of Indio	1942
985	Camp Granite	45 miles E of Indio	1942
985	Camp Iron Mountain	45 miles E of Indio	1942
985	Camp Clipper	37 miles W of Needles	1942
985	Camp Ibis	8 miles E of Needles	1942
988	Pacific Asia Museum	Pasadena	1929
989	Soviet Transpolar Landing Site	San Jacinto	1937
990	Christmas Tree Lane	Pasadena	1920
992	Site of Contractor's General Hospital	Desert Center	1933
993	Watts Towers	Los Angeles	1955
994	A.K. Smiley Public Library	Redlands	1898
996	Union Oil Company Building	Simi Valley	1890
997	Tuna Club of Avalon	Avalon	1898
1004	Old Town Irvine	Irvine	1887
1006	Beale's Cut Stagecoach Pass	Santa Clarita	1862
1009	Ramona Bowl	Hemet	1923
1011	Ennis House	Los Angeles	1924
1014	Long Beach Marine Stadium	Long Beach	1932
1015	Richard Nixon Birthplace	Yorba Linda	1912
1018	Manhattan Beach State Pier	Manhattan Beach	1920
1019	Kimberly Crest	Redlands	1897
1021	Liberty Hill Site	San Pedro	1923
1028	Madonna of the Trail	Upland	1929
1034	Tecolote Rancho	Holtville	1907

Source: California Department of Parks and Recreation, Office of Historic Preservation. (n.d.) California state historic landmarks listed by county. Retrieved February 4, 2003, from http://ceres.ca.gov/geo_area/counties/lists/landmarks_county.html

Table 7.6 in the Technical Appendices lists the sites in the SCAG region listed on the National Register of Historic Places.

REGULATORY SETTING

Cultural resources in the six-county SCAG region include archaeological sites of prehistoric or historic origin, fossil deposits of paleontological importance, and standing structures with national, state, or local significance. These resources are regulated at the federal, state and local levels as discussed below.

Federal Agencies and Regulations

National Environmental Policy Act (NEPA)

The NEPA of 1970 mandates that all federal agencies carry out their regulations, policies, and programs in accordance with NEPA's policies of environmental protection. NEPA encourages the protection of all aspects of the environment and requires federal agencies to utilize a systematic, interdisciplinary approach to agency decision-making that will ensure the integrated use of natural sciences such as geology. NEPA addresses a wide range of environmental issues including the documentation of, and potential impacts to, cultural and historic properties. Compliance includes an on-site survey by a qualified archaeologist prior to construction. A report of findings may be submitted to the State Historic Preservation Office for further consultation.

National Historic Preservation Act (NHPA)

NHPA established laws for historic resources to "preserve important historic, cultural, and natural aspects of our national heritage, and to maintain, wherever possible, an environment that supports diversity and a variety of individual choice." The Antiquities Act of 1966, which aimed to protect important historic and archaeological sites, initiated historic preservation legislation. It established a system of permits for conducting archaeological studies on federal land, as well as setting penalties for noncompliance. This permit process controls the disturbance that may be caused to archaeological sites. New permits are currently issued under the Archeological Resources Protection Act (ARPA) of 1979. The purpose of ARPA is to enhance preservation and protection of archaeological resources on public and Native American lands.

The Historic Sites Act of 1935 declared that it is national policy to "Preserve for public use historic sites, buildings, and objects of national significance." The NHPA expanded the scope to include important state and local resources. Provisions of NHPA establish the National Register maintained by the National Park Service, advisory councils on Historic Preservation, State Historic Preservation Offices, and grants-in-aid programs. Section 106 of the NHPA requires all federal agencies to consult the Advisory Council before continuing any activity affecting a property listed on or eligible for listing on the National Register. The Advisory Council has developed regulations for Section 106, to encourage coordination of agency cultural resource compliance requirements under Executive Order 11593 and NEPA with those of Section 106.

American Indian Religious Freedom Act and Native American Graves and Repatriation Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved.

Additionally, Native American remains are protected by the Native American Graves and Repatriation Act of 1990. Under this legislation, the excavation and disposition of remains is supervised by a designated "most likely descendent" as determined by the Native American Heritage Commission (see discussion of State Regulations below).

State Agencies and Regulations

California Environmental Quality Act (CEQA)

Certain portions of the California law are specifically concerned with the protection of cultural resources and archaeological human remains located on public or private land. The basic policy statements at the State level on which cultural resource protective regulations are based are contained in CEQA, adopted in 1970, the California Coastal Act of 1976, the Coastal Commission Archaeological Guidelines, State Office of Historic Preservation Guidelines for cultural resource surveys and data recovery programs, and Native American Heritage Commission guidelines for cultural resources identification and protection. Human remains of an archaeological nature are protected under CEQA and State Health and Safety Code. The CEQA Guidelines include guidance on significance criteria and mitigation measures for archaeological sites.

California Coastal Act (CCA)

The CCA (Public Resources Code, Sections 30000 et.seq.) includes protection of archeological resources into LCPs that regulate land uses within the coastal zone.

Other Provisions of Public Resources Code (PRC)

The State's cultural resources are regulated by the PRC. The PRC defines cultural preserves as "distinct areas of outstanding cultural interest" located in the State Park System for the protection of sites, buildings, or zones, which represent significant places or events in the flow of human experience in California. A historic resource includes, but is not limited to, "any object, building or structure, site, area, or place which is historically or archaeologically significant," or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Section 5097.5 of the PRC specifically defines "unauthorized excavation, removal, destruction, etc., of archaeological, paleontological or historical feature, on "Public Lands," as a misdemeanor.

The California Administrative Code includes the following regulations, Title 14, State Division of Beaches and Parks, Section 4307: Archaeological Features: No person shall remove, injure, disfigure, deface, or destroy any object of paleontological, archaeological or historical interest or value.

The California Penal Code, Title 14, part 1, Section 622 1/2 provides that injury, etc. to an object of archaeological or historical interest is punishable as a misdemeanor.

State Office of Historic Preservation (SHPO)

SHPO implements preservation laws regarding historic resources, and is responsible for the California Historic Resources Inventory (CHRI), which uses the National Criteria for listing resources significant at the national, state, and local level.

Native American Heritage Commission (NAHC)

Section 50907.9 of the PRC and Section 7050 of the Health and Safety Code authorizes the NAHC to regulate Native American concerns regarding the excavation and disposition of Native American cultural resources. Among its duties, the Commission is authorized to resolve disputes relating to the treatment and disposition of Native American human remains and items associated with burials. Upon notification of the discovery of human remains by a county coroner, the Commission notifies the Native American group or individual most likely descended from the deceased.

Local Agencies and Regulations

In addition to federal and state regulations, cities and counties in the SCAG region may also provide regulatory protection and advisement regarding cultural resources. For instance, many cities and counties fund agencies designated to identify and protect resources. Some afford local ordinances that identify goals and standards for maintenance and protection of such resources. An example is the City of Los Angles, which established a Cultural Heritage Commission that maintains an ongoing listing of historic-cultural monuments within the city. In 1987, the Orange County Board of Supervisors established policy and procedures for cultural resource management in unincorporated portions of the county. Some local general plans provide conservation elements or other elements directly related to cultural resources located within their jurisdiction.

METHODOLOGY

This section summarizes the methodology used to evaluate the expected impacts of implementation of the proposed Plan on paleontological, archeological, and historic resources in the SCAG region.

Comparison with the No Project

The analysis of cultural resources includes a comparison of the expected future conditions with the proposed Plan to the expected future conditions if no Plan were adopted. This evaluation is not included in the determination of the significance of impacts; however, it provides a meaningful perspective on the effects of the 2004 RTP.

Determination of Significance

The methodology for determining the significance of these impacts compares the future Plan conditions to the existing setting, as required in CEQA Guidelines Section 15126.2(a). The known archaeological and historical resources located within the SCAG region were evaluated using the criteria set forth by the Office of Historic Preservation, the California Register of Historic Resources, and CEQA Guidelines. A GIS map depicting state and federally recognized historic resources was compared to a map of proposed projects and associated growth in order to determine potential impacts to these resources. The research analysis was limited to state and federally recognized historic resources and landmarks, and does not include landmarks of local

level importance. The location of known archaeological sites is considered confidential information for archaeological scholars only and is not included in this document.

In evaluating the presence of paleontological materials within the SCAG region, USGS and the CGS were consulted. The following institutions were also consulted:

- Imperial County: Imperial County Museum; San Diego Museum of Natural History
- Los Angeles County: Los Angeles County Museum of Natural History
- Orange County: Historical/Cultural Programs Section of Orange County Harbors, Beaches and Parks department; Los Angeles County Museum of Natural History
- Riverside County: University of California Riverside
- San Bernardino County: San Bernardino County Museum of Natural History
- Ventura County: Los Angeles County Museum of Natural History

These resources were used to evaluate expected impact to the six-county SCAG region due to transportation developments and associated growth.

SIGNIFICANCE CRITERIA

In accordance with CEQA Guidelines, including *Section 15064.5 Determining the Significance of Impacts on Historical and Unique Archaeological Resources* and *Appendix G*, implementation of the projects and policies in the Plan would have a significant impact to cultural resources if the Plan would:

- Cause a substantial adverse change in the significance of a historical resource, defined as physical demolition, destruction, relocation or alternation of the resource or its immediate surroundings such that the significance of an historic would be materially impaired (Guidelines § 15064.5);
- Cause a substantial adverse change in the significance of a unique archaeological resource;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

IMPACTS AND MITIGATION MEASURES

All of the counties within the SCAG region contain archaeological localities and are rich with fossil bearing sedimentary formations. All areas within the region have the potential for yielding, as yet undiscovered, archaeological, and paleontological resources and human remains. As of February

2003, over 32,000 archaeological and historic locations have been identified in the SCAG region. Each of these sites is documented at the Archaeological Information Center, which holds location information on archaeological sites for each region in California. The precise location of archaeological sites is considered to be confidential, and professional archaeologists are prohibited from disclosing this information. Paleontological sites are also numerous in the SCAG region. Although the location of paleontological sites is not considered confidential, it is considered privileged, and therefore the exact locations are not disclosed here. The development of new transportation facilities may affect archaeological and paleontological resources, primarily through the disturbance of buried resources. Frequently, these resources are previously unidentified. Therefore, any excavation in previously undisturbed soil has the potential to impact archaeological and paleontological resources.

The development of new transportation facilities may affect historic architectural resources (structures 50 years or older), either through direct affects to buildings within the proposed project area, or through indirect affects to the area surrounding a resource if it creates a visually incompatible structure adjacent to a historic structure. Impacts to historic resources fall into three categories: 1) direct disturbance of buried resources, 2) direct impact or alternation of structures, and 3) indirect impacts to structures, such as vibration and corrosive air contaminants, and creation of a visually incompatible environment. All counties in the SCAG region contain a large number of historic properties and historic residential districts (see Table 3.8-6); therefore the potential for impacts to historic properties is significant. Improvements within existing rights-of-way are less likely to affect historical architectural resources. However, new highway segments through historic districts would constitute a significant impact. Also, reducing buffer zones between transportation corridors and reduction of historic resources through lane widening could cause significant impacts.

Table 3.8-6: Number of Landmarks per County

County	State Historic Landmarks	National Register
Imperial	**14**	**10**
Los Angeles	**101**	**385**
Orange	**25**	**104**
Riverside	**27**	**52**
San Bernardino	**41**	**52**
Ventura	**14**	**33**

Source: California Department of Parks and Recreation, Office of Historic Preservation. (n.d.) California state historic landmarks listed by county. Retrieved February 4, 2003, from http://ceres.ca.gov/geo_area/counties/lists/landmarks_county.html

Source: National Register of Historic Places. (2003). National register information system [Database]. Retrieved February 11, 2003, from http://www.nr.nps.gov/

All mitigation measures shall be included in project-level analysis as appropriate. The lead agency for each individual project in the Plan shall be responsible for ensuring adherence to the mitigation measures prior to construction. SCAG shall be provided with documentation of compliance with mitigation measures through its Intergovernmental Review Process.

Historic Resource Impacts

Impact 3.8-1: Development of highway, arterial and transit projects would potentially impact historic resources.

Types of projects that may impact historic resources include expressway projects that entail the development of new lanes and in some instances acquisition of new right-of-ways, and arterials and interchange projects which entail the development of new lanes and right-of-way acquisition.

In general, for new construction, the evaluation of the potential for indirect and direct impacts to historic resources should extend at least 1,000 feet from new construction. This should be applied in evaluating impacts during project level analysis. Undiscovered historic resources, refers to those structures that exist whose historic value has not previously been assessed or recognized. In more remote areas, structures of historic importance may not be currently listed on state or federal registers. In these instances, it is important to treat these structures as historic resources, if they meet the criteria that would make them eligible for the National Register or California State Historic Landmarks.

Improvements proposed in existing "rights of way," such as HOV lanes, HOT lanes, new bus-ways and goods movement capacity enhancement projects, mixed flow lanes, and "right of way" maintenance (such as pot-hole repair) would have limited potential to impact historic resources. Several of the planned projects include the construction of additional lanes and highway arterials. These projects could potentially impact the physical and aesthetic integrity of historic buildings and communities, as well as negatively impact the structures through increased levels of corrosive air contaminates which may damage the exterior of historic buildings.

Mitigation Measures

All mitigation measures should be included in project-level analysis as appropriate. The project proponent or local jurisdiction shall be responsible for ensuring adherence to the mitigation measures prior to construction. SCAG shall be provided with documentation of compliance with mitigation measures.

MM 3.8-1a: As part of the appropriate environmental review of individual projects, the project implementation agencies shall identify potential impacts to historic resources. A record search at the appropriate Information Center shall be conducted to determine whether the project area has been previously surveyed and whether resources were identified.

MM 3.8-1b: As necessary, prior to construction activities, the project implementation agencies shall obtain a qualified architectural historian to conduct historic architectural surveys as recommended by the Archaeological Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for cultural resources within 1,000 feet of the improvement.

MM 3.8-1c: The project implementation agencies shall comply with Section 106 of the NHPA if federal funding or approval is required. This law requires federal agencies to evaluate the impact of their actions on resources included in or eligible for listing in the National Register. Federal agencies must coordinate with the State Historic Preservation Officer in evaluating impacts and developing mitigation. This mitigation measure may include, but are not limited to the following:

- The project implementation agencies shall carry out the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of any impacted historic resource, which shall be conducted in a manner consistent with the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Weeks and Grimmer (1995).

In some instances, the following mitigation measure may be appropriate in lieu of the previous mitigation measure:

MM 3.8-1d: The project implementation agencies shall secure a qualified environmental agency and/or architectural historian, or other such qualified person to document any significant historical resource(s), by way of historic narrative, photographs, or architectural drawings, as mitigation for the effects of demolition of a resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur.

Significance After Mitigation

Due to the size and potentially large number of historic properties listed that could be disturbed as a result of the combined projects, this impact would remain a potentially **significant** impact to historic resources.

Archaeological Impacts

Impact 3.8-2: Construction activities involving excavation and earthmoving would potentially encounter archaeological resources.

The OHP defines an archaeological "site" as consisting of three or more related resources discovered in one locality. In the event of archaeological and paleontological discovery, the resources are collected, documented and curated at an educational institution, such as a school or a museum.

A unique archaeological resource includes artifacts or sites that meet any one or all of the following criteria:

- It has made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.

- It is associated with the lives of persons important to California's past.
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- It has yielded, or may be likely to yield, information important to the prehistory or history of California.

The 2004 RTP includes transportation projects that have the potential to impact archaeological materials because they could take place in previously undisturbed areas. Improvements and modifications to existing rights-of-way, such as HOV lanes, HOT lanes, new bus-ways and capacity enhancement facilities, mixed flow lanes, and right-of-way maintenance, would have less of an impact to archaeological resources because these project locations have previously been disturbed. However, construction of additional lanes, would potentially impact archaeological materials, if it would entail brush clearing, grading, trenching, excavation, and/or soil removal of any kind, in an area not previously used as a paved transportation facility.

The locations of Native American villages, burial grounds, and other archaeological sites are confidential. Archaeologists do not reveal information for these locales in order to preserve the integrity of these sites. Particularly the unknown sites that run the risk of being impacted, as their locations are unknown and cannot be avoided prior to surveys. Since this document analyzes impacts to cultural resources on a program level only, project-level analysis of impacts will also be necessary.

Mitigation Measures

MM 3.8-2a: As part of the appropriate environmental review of individual projects, the project implementation agencies shall consult with the NAHC to determine whether known sacred sites are in the project area, and identify the Native American(s) to contact to obtain information about the project site.

MM 3.8-2b: Prior to construction activities, the project implementation agencies shall obtain a qualified archaeologist to conduct a record search at the appropriate Information Center of the California Archaeological Inventory to determine whether the project area has been previously surveyed and whether resources were identified.

MM 3.8-2c: As necessary prior to construction activities, the project implementation agencies shall obtain a qualified archaeologist or architectural historian (depending on applicability) to conduct archaeological and/or historic architectural surveys as recommended by the Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for cultural resources.

MM 3.8-2d: If the record search indicates that the project is located in an area rich with cultural materials, the project proponent shall retain a qualified archaeologist to monitor any subsurface operations, including but not limited to grading, excavation, trenching, or removal of existing features of the subject property.

MM 3.8-2e: Construction activities and excavation should be conducted to avoid cultural resources (if found). If avoidance is not feasible, further work may need to be done to determine the importance of a resource. The project implementation agencies shall obtain a qualified archaeologist familiar with the local archaeology, and/or an architectural historian should make recommendations regarding the work necessary to determine importance. If the cultural resource is determined to be important under state or federal guidelines, impacts on the cultural resource will need to be mitigated.

MM 3.8-2f: Project implementation agencies shall stop construction activities and excavation in the area where cultural resources are found until a qualified archaeologist can determine the importance of these resources.

Significance After Mitigation

Due to the size and potentially large number of archaeological sites that could be disturbed as a result of the combined projects, this impact would remain a **significant** impact to archaeological resources.

Paleontological Impacts

Impact 3.8-3: Construction activities involving excavation and earthmoving may encounter paleontological materials. This is a significant impact.

Excavation related to construction of projects proposed in the 2004 RTP may cause unearthing of buried paleontological resources, such as true fossils, fossil casts, and breas. Areas of particular concern include Los Angeles and Riverside Counties.

Construction occurring in previously undisturbed areas and deep excavation activities would have the greatest likelihood to affect paleontological resources. Construction activities for each transportation improvement would not result in excavation beyond 150 feet on either side of any improvement. Excavation and soil removal of any kind, irrespective of depth, has the potential to yield resources of paleontological significance. This makes it difficult to predict which areas are paleontologically sensitive. Similar to Impact 3.8-2, construction and excavating activities relating to this project pose a significant impact to paleontological materials.

The location of paleontological localities is considered privileged information in order to protect the integrity of geological formations and therefore not disclosed here. However, fossiliferous geologic formations that exist in each county are identified in the following text.

Mitigation Measures

MM 3.8-3a: As part of the appropriate environmental review of individual projects, the project implementation agencies shall obtain a qualified paleontologist to identify and evaluate paleontological resources where potential impacts are considered high; the paleontologist shall also conduct a field survey in these areas.

MM 3.8-3b: Construction activities shall avoid known paleontological resources, if feasible, especially if the resources in a particular lithic unit formation have been determined through detailed investigation to be unique. If avoidance is not feasible, paleontological resources should be excavated by the qualified paleontologist and given to a local agency, or other applicable institution, where they could be displayed.

Significance After Mitigation

Due to the size and potentially large number of paleontological localities that could be disturbed as a result of the combined projects, this impact would remain a **significant** impact.

Impacts to Human Remains

Impact 3.8-4: Construction activities involving excavation and earthmoving may encounter human remains.

Humans have occupied the six-county SCAG region for at least 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore it is likely that excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials. Construction activities for each transportation improvement would not result in excavation beyond 150 feet on either side of any improvement and are considered to potentially yield a significant impact relative to the discovery of human remains. Under CEQA, human remains are protected under the definition of archaeological materials as being “any evidence of human activity”. Human remains are also protected under the Native American Graves and Repatriation Act (NAGPRA) of 1990, which was enacted to provide for the protection of Native American graves, as well as: culturally affiliated items, associated funerary objects, unassociated funerary objects, sacred objects, and objects of cultural patrimony.

The 2004 RTP transportation projects have the potential to yield previously undiscovered human remains, because they could take place in previously undisturbed or under-disturbed areas. Excavation and soil removal of any kind, irrespective of depth, has the potential to yield human remains.

Mitigation Measures

MM 3.8-4a: As part of the appropriate environmental review of individual projects, the project implementation agencies, in the event of discovery or recognition of any human remains, during

construction or excavation activities associated with the project, in any location other than a dedicated cemetery, shall cease further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the coroner of the county in which the remains are discovered has been informed and has determined that no investigation of the cause of death is required; and

MM 3.8-4b: If the remains are of Native American origin,

- The coroner will contact the Native American Heritage Commission in order to ascertain the proper descendants from the deceased individual. The coroner shall make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods. This may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains.

or,

- If the Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission, in which case

- The landowner or his authorized representative shall obtain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance where the following conditions occur:

    - The NAHC is unable to identify a descendent;

    - The descendant identified fails to make a recommendation; or

    - The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC Commission fails to provide measures acceptable to the landowner.

Significance After Mitigation

The recommended mitigation would require the local jurisdiction to follow a comprehensive procedure to assess the magnitude of the impact, and to avoid or mitigate the impacts, if necessary, therefore this impact is considered **less than significant** after mitigation.

Cumulative Impacts

A cumulative impact consists of an impact which is created as a result of the combination of the 2004 RTP together with other projects causing related impacts.

Impacts and Mitigation Measures

Cumulative Impacts 3.8-5: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and by inclusion of land-use-transportation measures, influences the pattern of this urbanization. The 2004 RTP's influence on growth contributes to regional cumulatively considerable impacts to existing historic resources and previously undisturbed and undiscovered cultural resources, as described in Impacts 3.8-1 through 3.8-4 above.

The amount of new urbanized acreage (consuming previously vacant land) would be on the order of 500,000 to 700,000 acres. This degree of urban development is reasonably foreseeable; however, to assign this future development to precise locations would be speculative, such that it cannot be estimated where cultural resources would be affected. Despite the inability to predict the acreage of previously undisturbed land that may be affected, it is reasonable to expect that this future urban development would contribute to the same types of impacts detailed in Impacts 3.8-1 through 3.8-4 above.

These effects are considered a significant cumulative impact.

Mitigation Measures

The cumulative impacts to cultural resources, due to the forecast urban development associated with the 2004 RTP, would be mitigated using the same measures detailed for Impacts 3.7-1 through 3.7-8, in addition to the following measure.

MM 3.8-5a: Future impacts to cultural resources shall be minimized through cooperation, information sharing, and program development of SCAG's *RCPG* and through SCAG's Energy and Environment Committee. The resource agencies, such as the Office of Historic Preservation, shall be consulted during this update process.

Significance After Mitigation

The impacts to cultural resources due to regional scale growth would be reduced through application of the mitigation measures, however the 2004 RTP's accommodation of approximately 6 million people to the SCAG region by 2030 would contribute to cumulative impacts. The 2004 RTP would **contribute significantly** to cumulative regional cultural impacts.

Comparison with the No Project

In the No Project alternative, the population of the SCAG region grows by 6 million people, however no regional transportation investments are made above the existing programmed projects. The population distribution follows past trends, uninfluenced by additional transportation investments.

Direct Impacts

Under the No Project alternative, there would be no new transportation projects (beyond those projects that would occur regardless of adoption of the Plan) resulting in fewer areas that would be impacted by excavation and construction activities. In Table 3.8-7, the No Project alternative is compared to the 2004 Plan impacts to previously undisturbed areas within the SCAG region. *The proposed Plan's transportation-related impacts to cultural resources would be greater than the No Project alternative*.

Table 3.8-7: Undisturbed Areas Occurring Within 150 feet of a Freeway, Transit, or Freight Rail Project (acres)

	2004 RTP (highways, transit and freight rail)	No Project
Total Acreage	15,424	3,229
% of 2004 RTP Acreage	100	21

Source: SCAG Analysis. (2003).
UCSB. (1999). GAP Analysis. (Best and most recent regional level data).

Cumulative Impacts

The No Project Alternative is expected to accommodate the same increase in total population as the proposed Plan. The Plan includes land use measures that support centers-based development, re-development and in-fill where feasible. These measures would help reduce the consumption and disturbance of natural lands. These measures are absent in the No Project Alternative. However, the proposed Plan also includes additional transportation improvements that facilitate access to natural lands that would be less accessible with the No Project Alternative. This improved accessibility would help facilitate population and economic growth to areas of the region that are currently not developed. Furthermore, the proposed Plan includes additional households and jobs associated with the economic benefits of the Plan that would consume vacant land. Due to these competing forces, it is expected that the No Project Alternative and the Plan would consume similar acreage of vacant land.

The No Project alternative's cumulative impacts to cultural resources due to urban development would be expected to be approximately the same as those of the 2004 RTP. Future urbanization of approximately the same magnitude as the Plan could be expected to impact existing historic resources and undisturbed areas that may contain cultural resources. *The No Project alternative's cumulative impacts to cultural resources would be approximately the same as those of the 2004 RTP.*

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